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RESULTS OF THE ARCHBOLD EXPEDITIONS. No. 19

ON SOME NON-PASSERINE NEW GUINEA BIRDS

By A. L. RAND

The following species have been selected for notice from those studied in the collection of the 1936 New Guinea Expedition. Time has not permitted a complete study of the collection and as I expect to return to New Guinea soon with the 1938 New Guinea Expedition it is advisable to publish this material now.

Descriptions of five new races from south New Guinea and one from north New Guinea are included. I have been favored with advice from Dr. E. Mayr while working up this material.

Anhinga rufa papua, new subspecies

Type.—No. 447417, Amer. Mus. Nat. Hist.; Q ad.; Lake Daviumbu, middle Fly River, south New Guinea; September 3, 1936; Richard Archbold, A.L. Rand, G. H. H. Tate.

DIAGNOSIS.—Differs from A. r. novaehollandiae in the female in the darker colored upperparts, with a reduction of the light markings; the top of the head and the back of the neck being darker with the brownish edgings much reduced and the dark color of the back of neck extending farther onto the sides; the fore back being more glossy black, with very reduced and darker brownish edgings; the scapulars, inner secondaries and wing-coverts having the gray markings much reduced in size and darker in color. In the male the neck and fore back is blacker, with less brown, but the light markings in the scapulars and wing-coverts are little smaller than in some of the Australian specimens.

WING MEASUREMENTS

	MALE	FEMALE
Australia	340, 349, 350, 353, 353, 357	342, 343, 352
	362, 363, 367	
New Guinea	351	332, 336, 346

DISTRIBUTION.—New Guinea and Fergusson Island.

REMARKS.—The New Guinea male comes from near Madang, the females from Lake Daviumbu and Fergusson Island. The adult females of this race, as with A. r. novaehollandiae, have white underparts.

Xenorhynchus asiaticus australis (Shaw)

Daru: 1 9 imm.; March 22, 1936.

Wing: 602.

The specimen, probably belonging to this form, is in immature plumage with a few iridescent feathers in the plumage of the head.

Though this species has not been collected on the mainland of New Guinea, Dr. Nevermann (1935, Mitt. Zool. Mus. Berlin, XX, p. 454) saw it several times on the coast of south New Guinea in 1933 and I made the following sight records in 1936:

Penzara: A single adult was seen standing in the edge of the water hole there on Dec. 18 and a black and white tail feather belonging to this species was picked up on the savanna.

Daru: During March three birds in immature plumage were occasionally seen soaring about over the island or feeding on an area on the coast where the mangroves had been cut.

Gaima: A pair of adult birds flew in and lit on the open marsh near Gaima on November 15.

Lake Daviumbu: Two adult birds were seen on different occasions in September, standing on the edge of lagoons in the savanna country. Twenty miles above Lake Daviumbu, on August 16, a single adult was seen soaring about over the lagoon country.

Notophoyx novaehollandiae (Latham)

Mabaduan: 1 ♀ ad.; April.

Daru: 2 & ad., 1 \, ad.; March 12, April 26.

Wing: ♂ 318, 320; ♀ 297, 308.

Stresemann and Paludan (1935, Mitt. Zool. Mus. Berlin, XX, p. 454) were the first to record this species for New Guinea. I collected it at Daru in 1934 (1937, Bull. Amer. Mus., LXXIIL, p. 6).

Though not recorded for New Guinea until 1935 there is in the American Museum collections an immature specimen from the Hydrographer Mountains collected by Eichorn Brothers in 1918.

Egretta intermedia plumifera (Gould)

Lake Daviumbu: $1 \circlearrowleft, 1 \circlearrowleft$; August 20, September 6.

Wing: ♂ 286; ♀ 284.

This species has been recorded twice from near Merauke (Bangs, O., and Peters, J. L., 1926, Bull. Mus. Comp. Zoöl., LXVII, p. 242: Stresemann, E., and Paludan, K., 1935, Mitt. Zool. Mus. Berlin, XX, p. 454) and once from north New Guinea at Ifaar (Hartert, E., 1930, Nov. Zool., XXXVI, p. 111). It was a very common species at Lake Daviumbu, feeding in flocks up to 75 and 100 in number on the extensive beds of half submerged rice grass in the lagoons. They were wary and

when flushed flew to light in trees on the edge of the lagoon, or to another part of the marsh. Probably it was this species that I saw in flocks in the swamps at Gaima, where I was unable to procure specimens.

Neither specimen was breeding; one had a small fish in its stomach.

Ixobrychus minutus dubius Mathews

Lake Daviumbu: 1 9 ad.; September 13, 1936.

Wing: 123.

This is the first record of this species for New Guinea and, as might be expected in south New Guinea, it appears to be the Australian race. There are no females from Australia available for comparison, but compared with a series of males it is even smaller (5 or ad. from Australia have wing of 130, 131, 133, 135, 141) and has the upper wing-coverts partly chestnut brown as do they.

This female was nearly ready to lay. Another bird, presumably its mate, was seen with it but could not be collected.

Circus species ?

Lake Daviumbu: 1 9 imm.; September 8, 1936.

Wing: 391.

Parts: iris brown; bill black, base gray, cere greenish yellow; feet vellow; nails black.

Pending the completion of a revision of the marsh hawks of this area, I prefer to list this specimen simply as Circus. It is worthy of record that silvery adult males, adult females and immature plumaged birds were not uncommon during our stay at Lake Daviumbu in August and September. During any morning spent on the marshes one or more birds were seen, beating about over the marsh or savanna in typically Circus fashion. They were very wary. A single male was seen near Gaima in November. The specimen had the right ovary present and about equal to the left in size.

Falco longipennis longipennis Swainson

Daru: 2 9; March 28, June 28, 1936.

Lake Daviumbu: $2 \circ$; August 26, 28, 1936.

Wing: 260, 264, 267, 268.

The little falcon was first recorded for New Guinea by Hartert in 1932 (1932, Nov. Guinea, XV, p. 446). Stresemann (1934, O. M. B., XLII, p. 157) has recorded it for New Britain. It is probably a migrant from Australia: none of the specimens showed signs of breeding. collected were the only ones seen; they were in savanna country or over open marsh. Stomach contents of two birds were as follows: (1) 4 adult bats and one young small bat; (2) large winged ants.

Uroaetus audax (Latham)

Gaima: $1 \circ ad., 1 \circ imm.$; November 13, 14, 1936.

Wing: ♀ ad. 550; ♀ imm. 558.

The adult is molting from a worn brownish-black plumage into a fresh black plumage. The immature bird had a small right ovary, the adult did not.

This is the second record of the wedge-tail eagle for New Guinea. I found it fairly common at Dogwa in 1934, but in 1936 besides the two collected only one other, an adult, was seen at Gaima, and none elsewhere, though I expected to find it on the Wassi Kussa River.

Gymnocrex plumbeiventris hoeveni (Schlegel)

Fly River, 5 miles below Palmer Junction: 1 \circlearrowleft , 2 \circlearrowleft , May 23–30. Wing: \circlearrowleft ad. 192; \circlearrowleft ad. 187, 196.

These three specimens are similar to a Setekwa River bird and these four south New Guinea specimens differ from specimens from Astrolabe Range, Dampier Island, Gobi (N. E. Papua), Waigiu and the Moluccas in the duller gray underparts washed with rufous brown, in the duller reddish brown of the breast, in having a conspicuous admixture of gray in the throat; the top of the head and back of the neck not clear rich rufous brown but duller and washed with dark olive, the rump and tail less blackish, and the rufous of the primaries duller.

The richly colored bird is undoubtedly *plumbeiventris* (type locality Misol). I have no material from the Aru Islands, but very possibly Aru Island birds are the same as the south New Guinea birds. As there is a name available (*hoeveni* Schlegel), for the Aru Island birds, I have provisionally referred the present specimens to that race.

Megacrex inepta pallida, new subspecies

Type.—No. 545676, Amer. Mus. Nat. Hist.; Q ad.; Hol, Humboldt Bay, New Guinea; August 10, 1928; E. Mayr.

DIAGNOSIS.—Differs from typical *inepta* in the paler, more buffy not brownish or vinaceous brown sides of the lower neck and sides of the body; the much paler flanks, the feathers tipped and washed with light brown instead of being dark rufous brown; and slightly lighter brown of rump, upper tail-coverts and primaries.

MEASUREMENTS.—Two females from north New Guinea have wings of 176 and 182; three females from south New Guinea, 174, 175, 181.

RANGE.—Recorded only from Humboldt Bay.

MATERIAL.—M. i. pallida, 2 ♀, Hol, Humboldt Bay; M. i. inepta,

1 $\,^{\circ}$, Fly River, east bank opposite Sturt Island, 1 $\,^{\circ}$, Bivak Island, 1 $\,^{\circ}$, Launch Camp, Setekwa River.

REMARKS.—The two Hol birds, and one from the Setekwa River, have little vinaceous tinge on the fore neck; the other two birds from south New Guinea have it pronounced.

Irediparra gallinacea novaehollandiae (Salvadori)

Lake Daviumbu: 1 σ imm., 1 \circ ad., 2 \circ imm.; August 28–September 4, 1936.

Wing: ♀ ad. 143.

As was to be expected, these belong to the pale Australian race which I collected for the first time in New Guinea in 1934, near Daru (1937, Bull. Amer. Mus., LXXIII, p. 26).

The jacana was fairly common at Lake Daviumbu, and was breeding in August and September, as the natives brought me a number of eggs obviously of this species.

Choriotis australis (Gray)

In 1934, Mr. Beach of Daru told me of shooting one of these birds in the Wuroi savanna years before (1937, Bull. Amer. Mus., LXXIII, p. 25). On the 1936–1937 Expedition, though I was unable to secure a specimen, Brass saw one on January 7 and I saw one, presumably the same bird, on January 7 and January 8, 1937, near the same place on the open savanna near Tarara. After much asking, a native finally brought me a primary which had been incorporated in a headdress and which he assured me had been taken from one of these birds killed a long time ago. Comparing it with Australian specimens confirms the identification.

This Australian species has not been collected in New Guinea.

Ptilinopus regina Swainson

Daru: $1 \circlearrowleft ad., 1 \text{ (sex ?) imm.}$; June 9, 1936.

Wing: ♂ ad. 135.

This is an Australian species not yet recorded from the mainland of New Guinea though the present specimens, extending its range within two miles of the New Guinea coast, make it seem probable that it occurs there.

The specimens are very like Cape York birds.

Ptilinopus iozonus pseudohumeralis, new subspecies

Type.—No. 447416, Amer. Mus. Nat. Hist.; \oslash ad.; Palmer River, 2 miles below its junction with the Black River, altitude 100 meters, south New Guinea; July 10, 1936; Richard Archbold, A. L. Rand and G. H. H. Tate.

DIAGNOSIS.—This race differs from humeralis in the generally brighter, more yellowish-green color of the upper- and underparts, and the more pronounced grayish subterminal markings in the lateral tail-feathers seen from above. The apparently less pronounced gray area in the anterior part of the scapulars, the larger orange area on the abdomen and the greater amount of yellow in the abdomen may be due to differences in the make of the skins.

RANGE.—Only known from the upper Fly but possibly the birds from the southern slopes of the Snow Mountains will prove to be this form.

Remarks.—D'Albertis collected several specimens of *P. humeralis* (=*P. iozonus*) on the upper Fly in 1874. This race is of course much more closely related to *humeralis* than to *iozonus* of the Aru Islands or *finschi* which is the form living on the middle and lower Fly, on the Wassi Kussa River, and all southeast New Guinea.

Geopelia striata papua, new subspecies

Type.—No. 421772, Amer. Mus. Nat. Hist.; \circlearrowleft ad.; Wuroi, Oriomo River, south New Guinea; January 19, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—Differ from *placida* from the Northern Territory in the darker nape with the black edgings to the feathers more pronounced, in the generally darker upperparts, and in the barring of the sides and back of the neck being coarser, the black bars being wider.

WING MEASUREMENTS.—10 males from Penzara, Mabaduan, Daru, Wuroi, Dogwa: 101-106 (Aver. 103.2).

Range.—South New Guinea.

REMARKS.—The Australian members of this species need revision but none of these is darker than *placida* from the Northern Territory. The south New Guinea birds are the same size as Northern Territory birds. Cape York birds differ more from the south New Guinea birds in being smaller (wing: 6 & 94-100, aver. 96.6).

The southeast New Guinea birds compare well with south New Guinea birds in size (wing: σ , 100, 100, 102, 104) but in coloration are more similar to the North Australian birds and should be referred to placida. Birds from New South Wales and Victoria (tranquilla) are larger, six males have the wings as follows: 105, 105, 106, 107, 108, 108.

Trugon terrestris leucopareia Meyer

Fly River, 5 miles below Palmer Junction: 3 ♂ ad.; May 22–26. Wing: 179, 179, 181.

These compare well with three southeast New Guinea males from Kubuna and Milne Bay. This was a shy retiring bird of the forest floor, possibly more common than the number seen would indicate.

At Palmer Junction camp the natives brought in several; at the

Black River camp occasionally one or a pair of birds were seen but none secured there. Both on the ridges and in the damper forest of the little valleys the birds flushed within a few yards of me to go flying with whirring, grouse-like flight some distance through the forest before lighting on the ground.

About June 10 Tate found a nest of this species. It was near a wellused trail near camp and the nest had been deserted recently but the well-grown embryo taken from the egg made identification certain. July 7, I found another nest similar in location and structure. nest was on the ground at the base of a tree on a slight ridge covered with tall, not especially dense forest. The under-growth was light opengrowth of slender, woody plants.

The nest was placed against a plank buttressed tree, in the angle between two buttresses so that the nest touched the trunk, one buttress and a stick resting against the other, thus protecting it from approach on three sides.

The nest was a rather substantial affair for a pigeon's, placed on the ground from which the bird had evidently cleared the moss. posed of two parts; the foundation, about 200 × 260 mm. across and several centimeters deep in places, of short dead sticks, some up to 20 mm. in diameter and many quite rotten; and the nest proper, composed almost entirely of rootlets with a few bits of moss and dead leaves. This was guite flat and measured about 130 mm. across by 10 mm. thick. Strangely enough this upper part of the nest was not placed in the center but at the back of the foundation platform. This, which I first thought was accidental, was true of all three nests seen, giving a little platform of sticks in front of the nest.

As I approached the nest the incubating bird flushed when I was fifteen feet away, rising sharply, then flying down at a long angle and lighting on the ground about 50 yards away. The bird did not return to the nest, which remained deserted until I collected the egg several days later.

The only other station for the species on the 1936–1937 Expedition was the Sturt Island camp. Here, on October 12, a boy showed me a nest similar in construction and location to the nest described above, and placed on the ground against a tree trunk between two buttresses, in the forest near the Fly River. The first time I visited this nest the bird flushed from the nest, rose sharply to ten or fifteen feet, then flew down at a long angle to light on the forest floor where I was unable to secure it. Two days later when I visited the nest it was deserted, and the next day the egg was broken. No other example of this species was seen during the month spent at this camp. Each of the three nests seen contained a single egg.

The egg collected June 12 was bluntly ovate in shape, the small end little smaller than the large end; the shell was slightly granular with a slight gloss; white in color. It measured 28.2×38.9 mm. The egg collected July 13 was similar and measured 27×39.5 mm.

Trichoglossus haematodus haematodus (Linnaeus)

Palmer River, 2 miles below its junction with the Black River: $3 \, \sigma$, $1 \, \circ$; June 15-24.

Wing: ♂ 132, 136, 139; ♀ 130.

These birds differ from southeast New Guinea birds in the blacker, less orange-brown tinged nape, the blackish cheeks tinged with blue instead of browner tinged greenish, and the yellower neck band, and in these characters compare well with *haematodus*.

On two characters this series differs from typical haematodus: the paler and duller red of the breast and the black edgings of the breast feathers being mixed with green. As these characters are evidences of immaturity in this species, even though one of the present series does not appear immature otherwise, I think it inadvisable to separate them on this basis.

This considerably extends the range of this race, which thus ranges in south New Guinea from the Arfak Peninsula to and across the upper Fly River (for these specimens were taken on the east bank of the Palmer, tributary of the Fly).

In the eastern part of this range it is separated from the coast by the range of *nigrogularis* which ranges from Princess Marianne Straits (Bangs, O., and Peters, J. L., 1926, Bull. Mus. Comp. Zoöl., LXVII, p. 426) eastward to the Fly River which it crosses (one specimen from Gaima) and inland at least to Lake Daviumbu on the middle Fly from which locality we also have specimens.

Is it possible that the dark-bellied specimens from the southern slopes of the Snow Mountains which have been considered individual variations represent a coastal form? A single specimen from the Setekwa River which I have examined agrees with *haematodus* except for the black belly.

Charmosynopsis multistriata Rothschild

Fly River, 5 miles below Palmer Junction: 2 ♀ imm.; June 4, 1936. Wing: ♀ imm. 94, 98.

O. Grant records that the sexes of this species are similar. The present two females, compared with two adult males from the upper Setekwa River, differ in the almost complete lack of yellowish in the sides and top of head, the duller yellow of the streakings below, the reduction in size of the orange-vellow spots in the hind neck, the grayer nape, the green back lacking an olive tinge, and the pointed tail-feathers. mature specimens from the Snow Mountains are available to determine whether the color differences are geographical or are a matter of age.

This rare species was hitherto known only from the Mimika, Setekwa and Utakwa Rivers.

Opopsitta gulielmi-tertii fuscifrons (Salvadori)

Tarara: 1 ♂; December 30, 1936. Penzara: 1 or: December 18, 1936. Gaima: $3 \circlearrowleft 3 \circlearrowleft$; November 14, 1936.

Lake Daviumbu: $5 \circlearrowleft$, $2 \circlearrowleft$; August 20-September 18, 1936.

Palmer River, 2 miles below its junction with the Black River: 1 9; July 18, 1936.

The Black River specimen is abnormal in having part of its plumage yellow, but it has the typical brown forehead of this race. specimens are typical representatives of this form except the series from Of the specimens from Gaima the two adult males have the forehead brown; a male in second-year plumage and a female in adult plumage have a slight bluish tinge to the forehead; of the two immature females one has the forehead somewhat bluish, the other has the forehead blue and the cheeks tinged bluish, comparing well with an immature male from Kubuma.

This indicates that while the race fuscifrons reaches the east bank of the Fly River from the coast to its headwaters, there is a tendency toward the eastern race suavissima on the east bank of the Fly River at its mouth at least, and this tendency appears in the immature plumage most strongly, is less evident in the second-year males and females, while the adult males are typical fuscifrons.

Aegotheles wallacei Wallacei Grav

Fly River, 5 miles below Palmer Junction: ♂ adult; June 3, 1936. Wing: 119.

This specimen had no external trace of a right leg. Whether or not it had ever had a right leg it certainly had successfully lived a long time without one, was in good plumage and flesh, and had somewhat enlarged testes.

This is the most easterly record of this species.

Aegotheles cristatus major Mayr and Rand

Tarara: $1 \, \mathcal{S}, 1 \, \mathcal{Q}$; January 11, 17, 1937.

Wing: ♂ 138; ♀ 142.

This race was founded on the unique type. These two new skins compare well with the type, except that the throat and upper breast are less heavily marked, in one of them as lightly marked as some North Queensland birds. The darker back, with more distinct barring and the coarser black fleckings in the white of the head also distinguishes the New Guinea specimens.

Birds from the Northern Territory average larger (12 males, average wing 135.8) than North Queensland birds (7 males and females, average wing 132.1) somewhat approaching the south New Guinea birds (138, 142, 149); but the New Guinea birds also differ from these in the darker upperparts with barring coarser and more distinct, the coarser black fleckings in the white of the top of the head and the narrower nuchal band. Many of the Northern Territory birds in the gray phase have the outer edges of the primaries more or less rufous or have a rufous tinge on the back or on the top of the head. This is lacking in the three New Guinea specimens.

The two south New Guinea birds were found in shrubby trees in the open savanna.

Lyncornis papuensis astrolabae (Ramsay)

East bank Fly River, opposite Sturt Island: 1 \emptyset , 1 \circ ; October 23, 1936.

Wing: ♂ adult 192; ♀ adult 199.

These specimens compare well with three skins from Astrolabe Bay and both sets of specimens differ from three Arfak skins in being darker above, with larger black markings and in having the rufous markings paler.

Mayr (1937, Amer. Mus. Novitates, No. 939, p. 7) has pointed out these characters separating the Astrolabe Bay from Arfak birds. Lacking material to decide on the status of *Eurostopodus astrolabae* Ramsay, described from southeast New Guinea and which is obviously *Lyncornis papuensis*, he suggested *elegans* Reichenow, described from the Ramu River, as the name for the Astrolabe Bay birds. But since south New Guinea birds are similar to Astrolabe Bay birds it seems probable that all birds from east New Guinea are the same and *L. p. astrolabae* should be used for all of them with *elegans* Reichenow a synonym.

FIELD NOTES.—The only time I encountered this dark nightiar was at the Sturt Island Camp where I collected the above two birds and their nest.

Nest.—The egg was laid on the bare ground; and it looked as though the dead leaves that littered the ground had been scraped aside leaving an area of bare earth about 18 inches across, and the single egg was lying on the side of this. This was in a small opening in the low, rather dense slender undergrowth and bamboo of the open forest on a ridge near the tea-tree swamp.

The nest contained one egg. The egg was very bluntly ovate, the small end little smaller than the large end; ground color light brown but so heavily marked with intermingling blotches of light and dark brown, more or less obscured with white, as to give the egg a mottled appearance.

The egg measured 25×32 mm.

When I first approached the nest in the early morning the female flushed when I was 20 feet away and made several short flights, alighting on ground or low bamboo before I secured it. No male could be found then but I returned to the nest again that evening after dark and found the male incubating. Its eyes gleamed orange-red in the rays of the torch.

Both birds had stomachs filled with small green cicads only.

Syma torotoro pseutes Mathews

Gaima: $1 \circlearrowleft, 3 \circlearrowleft$; November 11–21.

East bank Fly River, opposite Sturt Island: $3 \circlearrowleft, 3 \circlearrowleft$; October 10–29.

Lake Daviumbu: $4 \circlearrowleft, 2 \circlearrowleft$; August 21–September 24.

Fly River, 30 miles above D'Albertis Junction: 1 ♂; August 11.

Fly River, 5 miles below Palmer Junction: 1 &, 1 \, ; May 17, 31.

Palmer River, 2 miles below its Junction with the Black River: $1 \, \sigma$; June 29.

For measurements, see under S. t. brevirostris. When Mayr and I worked out the south New Guinea collection of the 1933–1934 Archbold Expedition we considered the Oriomo River (Wuroi and Dogwa) birds as pseutes. They were plainly distinct from meeki on the basis of their darker coloration below and from torotoro in their smaller size (1937, Bull. Amer. Mus., LXXIII, p. 80). Junge (1937, Nova Guinea, (N. S.) I, p. 174) has considered the birds from the southern Snow Mountains as pseutes, differing from torotoro in the average smaller size. Besides the material listed above I have three males from the upper Setekwa River and the Snow Mountains.

This material substantiates the conclusions that pseutes is a valid race, distinguished from torotoro by its small size and from meeki by its darker underparts. The birds from Gaima, near the mouth of the Fly, and those from the Oriomo River are slightly paler below than those from the upper Fly and the Snow Mountains but should all be included in this race. No female has as small a black area in the crown as do some meeki, but the black in the crown averages but little larger than in

that race. The range of *pseutes* is apparently from the southern slopes of the Snow Mountains to the east bank of the Fly River, excluding the range of *brevirostris*. On both sides of the Fly River it extends to the coast. West of the Fly it reaches to the Oriomo River; a specimen from Mabaduan is intermediate between it and *brevirostris* which occurs on the Wassi Kussa River.

Syma torotoro brevirostris, new subspecies

Type.—No. 447419, Amer. Mus. Nat. Hist.; σ ad.; Tarara, Wassi Kussa River, south New Guinea; December 24, 1936; Richard Archbold, A. L. Rand and G. H. H. Tate.

DIAGNOSIS.—The shortness of the bill distinguishes this form from all the other races of torotoro, and the paler underparts and upperparts also distinguish it from all but meeki. Compared with meeki in color the underparts have about the same paleness, but the back is paler, the fresh green feathers being lighter and with less of an olive tinge; the worn bluish feathers being lighter blue.

MALE		FEMALE	
WING	$\mathbf{BiLL^1}$	WING	Bill
71, 71, 71,	27.5, 28.5,	71, 73, 73,	27, 28, 29,
72, 72, 73,	28.5, 29,	73, 74	29.5, 31
76	29.5, 30		
71, 72, 73	29, 31, 31.5,	72, 73, 74,	30.5, 31, 31,
74	32, 32	74, 76	32, 32.5
	·	·	
70, 72, 73,	29, 30, 30,	72, 73, 73,	27.5, 28, 30,
73, 73, 73,	30, 30, 30.5,		30, 30, 30,
75, 76, 78	31, 31.5, 32,	76, 76	31, 31
, ,	32, 32, 33	ŕ	
73, 73, 74,	30, 31, 31.5,	71, 74	31, 31
74, 75, 76	31.5, 32		
, ,	•		
75, 77	31.5, 31.5	74, 74, 77, 77, 78	30.5, 31, 31.5, 33
	WING 71, 71, 71, 72, 72, 73, 76 71, 72, 73 74 70, 72, 73, 73, 73, 73, 73, 75, 76, 78 73, 73, 74, 74, 75, 76	Wing Bill ¹ 71, 71, 71, 27.5, 28.5, 72, 72, 73, 28.5, 29, 29.5, 30 71, 72, 73 29, 31, 31.5, 74 32, 32 70, 72, 73, 29, 30, 30, 73, 73, 73, 30, 30, 30.5, 75, 76, 78 31, 31.5, 32, 32, 32, 33 73, 73, 74, 30, 31, 31.5, 74, 75, 76 31.5, 32	Wing Bill¹ Wing 71, 71, 71, 71, 27.5, 28.5, 72, 72, 73, 28.5, 29, 73, 74 71, 72, 73, 74 73, 74 76 29.5, 30 72, 73, 74, 74 71, 72, 73 29, 31, 31.5, 72, 73, 74, 74, 76 70, 72, 73, 29, 30, 30, 72, 73, 73, 73, 73, 73, 73, 73, 73, 73, 74, 74, 75, 76, 78 31, 31.5, 32, 76, 76 73, 73, 74, 30, 31, 31.5, 71, 74 74, 75, 76 75, 77 31.5, 31.5 74, 74, 77,

DISTRIBUTION.—Known only from the area between the Wassi Kussa and Morehead rivers. Its range may extend farther west, but to the east *pseutes* replaces it on the Oriomo River.

REMARKS.—In this series a number of adult birds have a small dusky mark on the culmen near the tip, but this is evidently individual, and also occurs occasionally in *pseutes* and *meeki* in apparently fully adult birds, even in some cases in breeding individuals. The young, of course,

¹ Bill measured with dividers from anterior edge of nostril to tip.

has the bill black. In flavirostris from Cape York the black on the tip of the bill is more pronounced.

Sauromarptis tyro archboldi, new subspecies

Type.—No. 447418, Amer. Mus. Nat. Hist.; or ad.; Tarara, Wassi Kussa River, south New Guinea; January 20, 1937; Richard Archbold, A. L. Rand, and G. H. H. Tate.

DIAGNOSIS.—Differs from tyro in the much paler underparts, with only a tinge of buffy in breast and belly, instead of being lightly or distinctly ochraceous; in the paler spotting in the crown, hind neck and fore back, and the paler blue of the wing coverts and rump.

COLOR OF SOFT PARTS.—Iris brown; maxilla black, mandible white; feet pale greenish gray.

WING MEASUREMENTS MALE

Aru Island South New Guinea

FEMALE 145, 150 147, 152, 153 (8) 146-156 (13) 148-156 (average 150.7) (average 152.6)

RANGE.—Known only from the area between the Morehead and the Wassi Kussa River in south New Guinea.

REMARKS.—This is the first authentic record of this Aru Island species for New Guinea. Salvadori (1881, Atti. R. Accad. Sci. Torino, XVI, p. 621) described what are evidently two specimens of this species as S. cyanophrys. The skins were said to have come from New Guinea. In comparing this new species, Salvadori says it is more rufescent below than tyro. Obviously the specimens were mislabelled Aru Island skins.

In both the Aru Island and New Guinea specimens there is considerable variation in the amount of black edgings of the feathers of the underparts. In all but one of the New Guinea specimens the markings are very few and narrow and chiefly on the breast; a few specimens are without them but one, possibly immature as the bill is mostly black, has the black scaling very conspicuous on the breast and fairly so on the upper abdomen and flanks. The same variation is shown by the Aru Island skins, but in these the heavily marked skins have the bill the same color as the rest of the series.

This kingfisher was a common species in the savanna at Tarara and Penzara; apparently it is as much a savanna species as Dacelo leachi, and was not seen in the forest. It was usually seen in pairs, or loose parties of three or four, sitting well up in the savanna trees, and was usually wary and difficult to secure. Their call is a loud, throaty "Kurk" repeated a number of times, somewhat similar to one of the calls of D. leachi.

birds sit upright and the tail is occasionally flicked up over the back for a few seconds, both when calling and when silent.

Six stomachs examined contained insects including beetles, ants, winged ants, and a five-inch walking-stick insect. Sometimes the birds descended to the ground for their prey; probably some are taken from leaves and bushes, and one I saw was fluttering about on the edge of a savanna tree apparently catching large winged green ants from the air and from the leaves; its stomach was crammed with these insects.

They sleep roosting in savanna trees as Tate shot one by torch light one night in such a situation. Six breeding females, including one nearly ready to lay, were taken in December and January, but strangely enough none of the males had fully enlarged gonads. The natives say that, unlike *Dacelo leachi*, which nests in holes in arboreal termite mounds, this species nests in holes in trees.

Clytoceyx rex rex Sharpe

Palmer River, 2 miles below its junction with the Black: 1 \circlearrowleft imm., 1 \circlearrowleft imm.; June 9, 25.

Altitude 100 meters.

Wing: ♂ imm. 163; ♀ imm. 162.

Though immature, the small size of these specimens definitely places them with the eastern race and this greatly extends its range westward.

Halcyon nigrocyanea stictolaema (Salvadori)

East bank Fly River opposite Sturt Island: 3 ♂; October 15–27. Wing: ♂ ad. 93, 94, 94.

On the upperparts these three birds are very similar; on the underparts two of the males have the throat feathers white, tipped with blue, giving a mottled appearance, and the rest of the underparts blue and black. The other male has more white on the throat and a narrow white bar across the central portion of the lower breast.

Tanysiptera hydrocharis Gray

Tarara: 1 ♂ ad., 1 ♀ ad.; January 3.

Lake Daviumbu: $1 \circ \text{imm.}$; September 16. Wing: 0^{-1} ad. 92; 0^{-1} ad. 96; 0^{-1} imm. 0^{-1} imm. 0^{-1}

This is the third record for New Guinea for this Aru Island species (see 1937, Bull. Amer. Mus., LXXIII, p. 85, for other two south New Guinea records).

Tanysiptera sylvia mira Hartert

Fly River, 5 miles below Palmer junction: 1 σ ad., 1 \circ ad.; May 28, June 4.

Lake Daviumbu: 1 ♂ imm.; September 5.

These two adults have the fully elongated central tail-feathers. Compared with the series of 3 birds from Hollandia and Ifaar (which all have some juvenile feathers and none has the very elongated central tail-feathers of the adult complete) from which Hartert described *mira*, they appear to be the same. Not only do they differ from *salvadorina* in the darker underparts and in the darker blue of the tail and tail-coverts as Hartert pointed out, but the wing-coverts and outer edges of the remiges are also darker blue.

This appears to give *mira* a discontinuous distribution, but immature specimens of this species which probably belong to this race have been recorded on the Eilanden and Setekwa rivers and as it is apparently everywhere a rare bird in New Guinea it will probably be found elsewhere in western New Guinea.

This form is however very close to *sylvia* of Cape York, the only constant difference is that the Cape York birds average considerably darker below, though the lightest colored specimens are very nearly as light as the New Guinea specimens.

WING MEASUREMENTS

	MALE	FEMALE
South New Guinea	101	93
Hollandia and Ifaar	98	96, 100
Cape York	94, 94, 96, 98, 99	94, 94, 95, 96, 67